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Macroeconomics

Business Cycles

What are business cycles?

Business cycles are short run fluctuations in economic activity. You see, economic activity does not grow at a constant rate; instead, at times the economy grows faster than its long term average rate of growth, and at other times the economy grows more slowly (or even shrinks). These fluctuations around the average long term growth rate of the economy are known as business cycles.

Have all business cycles been alike?

No. Though there have been many similarities among business cycles (which we'll discuss later), each one had a duration and intensity that differed from its counterparts.

Wow. What about these terms: **recession**, **depression**, and **expansion**?

A *recession* is a contraction of economic activity, including real GDP. A prolonged, severe recession is known as a *depression*. An *expansion* is, as you might expect, an increase in economic activity, including real GDP.

What's happening in the U.S. right now?

We appear to be in a recession.

Bummer. What causes business cycles?

This topic will be discussed in great detail in later sets of notes, when we develop models of the economy that help us understand short term economic fluctuations.

If an expansion ends and a recession begins, what's that called?

The precise end of an expansion is called the *peak* of the business cycle. (The precise end of a recession is called the *trough* of the business cycle.)

How can we tell when we are in a recession or expansion?

The most important indicator is the course of real GDP. If real GDP is increasing, then we are almost certainly in an expansion. If it is declining, then we are almost certainly in a recession.

What about other important economic variables, such as unemployment, consumption, etc. Do they change during business cycles?

Yes. This is where the similarities among business cycles are intriguing. Other variables tend almost always to move in similar ways at similar times during economic fluctuations.

Can you be a bit more precise?

Yes. Let's define a few terms to help us be more precise:

Procyclical: The variable moves in the same direction as the business cycle. In a recession, the variable decreases. In an expansion, the variable increases.

Countercyclical: The variable moves in the opposite direction as the business cycle. In a recession, the variable increases. In an expansion, the variable decreases.

Acyclical: It is unclear how the variable may move during a business cycle; there is no clear established relationship between the business cycle and the variable.

Leading: the variable tends to move slightly in advance of a peak or trough in the business cycle (perhaps helping us to predict when a recession or expansion will begin or end!)

Coincident: The variable moves at the same time as the business cycle.

Lagging: the variable begins to move after a peak or trough in the business cycle.

Here's a table showing how a bunch of economic variables are related to the business cycle.

Variable	Direction	Timing
Industrial Production	procyclical	coincident
Consumption	procyclical	coincident
Investment	procyclical	leading
Employment	procyclical	coincident
Unemployment	countercyclical	unclear
Labor productivity	procyclical	leading
Real wage	procyclical	unclear
Money supply growth	procyclical	leading
Inflation	procyclical	lagging
Stock prices	procyclical	leading
Nominal interest rates	procyclical	lagging
Real interest rates	acyclical	unclear

Do you have any comments on the above table?

Of course.

--Investment is the most volatile component of spending during business cycles.

Consumption is far less volatile.

--In the U.S., the *Index of Leading Indicators* attempts to use leading variables (that theoretically start to change before a peak or trough) to forecast the future short run course of the economy. This index hasn't done a very good job of forecasting, unfortunately.

I really want to know what causes recessions and expansions. Can you give me a **preview**?

Yes.

Recall from growth theory, that in the long term, the average annual growth rate of GDP depends upon: growth in total factor productivity, growth in the labor supply, and growth in the capital stock. Well, other events cause GDP in the short run to grow by a greater or lesser amount than this long term average. Such events include:

--Events which change aggregate demand (total spending in the economy), such as changes in consumer confidence, changes in tax rates or government spending, or changes in incomes in countries that buy our exports. Most economists agree that higher aggregate

demand leads to greater economic activity in the short run, while lower aggregate demand leads to less economic activity in the short run.

--Monetary policy: Economists disagree on the extent to which this occurs, and the precise reasons why it occurs, but most agree that an expanding money supply causes more economic activity in the short run, and a contracting money supply causes less economic activity in the short run.

--Supply shocks: Temporary changes in the availability (and hence cost) of important factors of production (such as oil) can cause economic activity to veer from its long run average.

But don't forget this **very important note**: The events listed above can cause a temporary change in economic activity above or below its long term growth rate, but economic forces (to be discussed later in the semester) tend to eventually push the growth rate of real GDP back to its long run average rate.

Can you do a brief example?

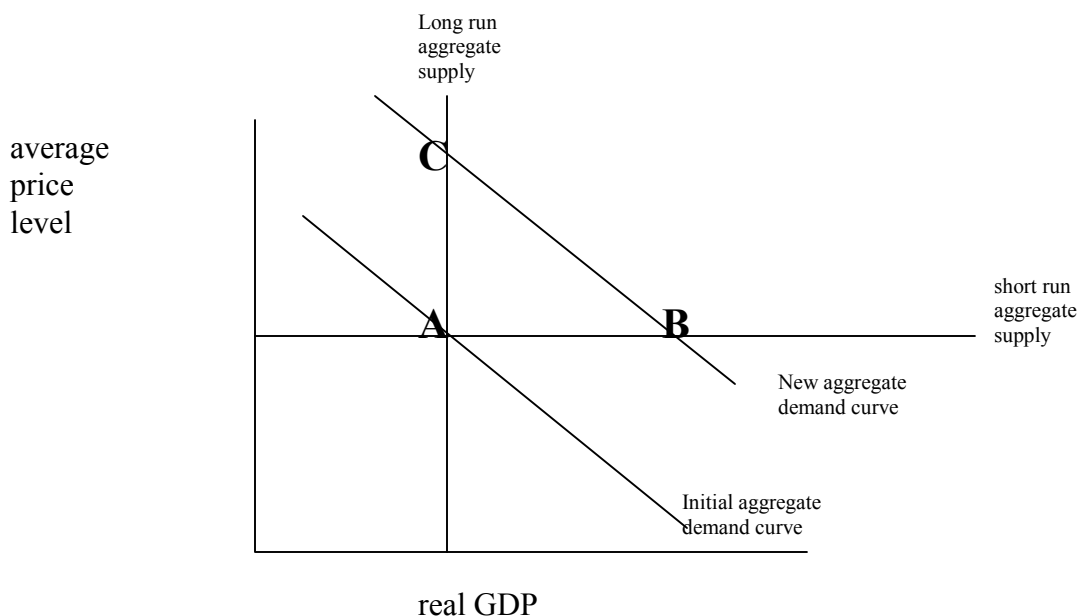
Yes.

As we'll see in detail later, many economists believe that a reduction in income tax rates will cause real GDP growth to rise in the short run, due to a spurt in consumption leading to higher aggregate demand. In the longer run, however, higher prices and interest rates choke off the higher aggregate demand, and the spurt in economic activity ends.

How about a graph illustrating the above example?

Ok, but this is the last thing that I'll do.

In the graph below, the economy is initially operating at full employment GDP at point A. Then a cut in income taxes causes aggregate demand to rise, and the economy moves in the short run to point B. Eventually, however, prices rise and choke off demand, and the economy returns to full employment GDP at point C. (We'll delve into the details of this graph later in the semester.)



I don't fully understand the graph

Don't worry. This is just a preview. We will get into the details of the graph later in the semester.